Docket No. 8321-163 US (formerly TJU-2412)

Appln. No.: 09/819,249 Reply to Office Action dated May 28, 2003

reply to Ollies Hellen and They are

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

- 1. (Currently Amended) An in vitro method of screening an individual who is suspected of having primary and/or metastatic stomach or esophageal cancer for primary and/or metastatic stomach or esophageal cancer cells comprising the steps of examining a sample of extraintestinal tissue and/or body fluids from said an individual to determine whether guanylin cyclase C GCC is being expressed by cells in said sample wherein expression of said guanylin cyclase C is expressed in GCC indicates a possibility of primary and/or metastatic stomach or esophageal cancer cells present in said sample.
- 2. (Currently Amended) The method of claim 1 wherein expression of said guanylin cyclase C GCC by said cells is determined by detecting the presence of guanylin cyclase C GCC gene transcription product.
- 3. (Currently Amended) The method of claim 1 wherein expression of said guanylin cyclase C GCC by said cells is determined by polymerase chain reaction wherein said sample is contacted with primers that selectively amplify guanylin cyclase C GCC gene transcript or cDNA generated therefrom.
- 4. (Currently Amended) The method of claim 1 wherein expression of said guanylin cyclase C GCC by said cells is determined by immunoassay wherein said sample is contacted with antibodies that specifically bind to guanylin cyclase C GCC gene translation product.
- 5. (Original) The method of claim 1 wherein said sample is body fluid.
- 6. (Original) The method of claim 1 wherein said sample is blood.
- 7. (Original) The method of claim 1 wherein said sample is lymphatic tissue and/or fluid.
- 8. (Original) The method of claim 1 wherein said sample is a lymph node sample.
- 9. (Currently Amended) The method of claim 1 wherein the individual has previously been diagnosed with having stomach or esophageal cancer.
- 10. (Currently Amended) The method of claim 1 wherein the individual has previously been diagnosed with and treated for stomach or esophageal cancer

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- 11. (Currently Amended) An in vitro method of screening an individual suspected of having primary and/or metastatic stomach or esophageal cancer for evidence of the presence of primary and/or metastatic stomach or esophageal cancer cells comprising the steps of examining a sample of extraintestinal tissue and/or body fluids from said an individual to determine whether guanylin cyclase C GCC gene transcription or translation product is present in said sample wherein the presence of guanylin cyclase C GCC gene transcription and or translation products are present in product in said sample indicates that the individual may have primary and/or metastatic stomach or esophageal cancer cells. in said sample.
- 12. (Currently Amended) The method of claim 10 comprising the steps of examining a sample of extraintestinal tissue and/or body fluids from an individual to determine whether guanylin cyclase C GCC gene transcription product is present in said sample.
- 13. (Currently Amended) The method of claim 12 wherein the presence of guanylin cyclase C GCC gene transcription product is determined by polymerase chain reaction wherein said sample is contacted with primers that selectively amplify guanylin cyclase C GCC gene transcript or cDNA generated therefrom.
- 14. (Currently Amended) The method of claim 11 wherein the presence of <u>guanylin cyclase C</u> GCC gene translation product is determined by immunoassay wherein said sample is contacted with antibodies that specifically bind to <u>guanylin cyclase C</u> GCC gene translation product.
- 15. (Original) The method of claim 11 wherein said sample is body fluid.
- 16. (Original) The method of claim 11 wherein said sample is blood.
- 17. (Original) The method of claim 11 wherein said sample is lymphatic tissue and/or fluid.
- 18. (Original) The method of claim 11 wherein said sample is a lymph node sample.
- 19. (Currently Amended) The method of claim 11 wherein the individual has previously been diagnosed with having stomach or esophageal cancer.
- 20. (Currently Amended) The method of claim 11 wherein the individual has previously been diagnosed with and treated for stomach or esophageal cancer
- 21. (Currently Amended) An in vitro method of confirming that a tumor cell removed from a patient suspected of having stomach or esophageal cancer cells is a stomach or esophageal tumor cell comprising the step of determining whether a tumor cell expresses guanylin cyclase C GCC wherein expression of guanylin cyclase C GCC indicates that the tumor cell is a stomach or esophageal tumor cell.
- 22. (Currently Amended) The method of claim 21 wherein expression of <u>guanylin cyclase C</u> GCC by said tumor cell is determined by detecting the presence of <u>guanylin cyclase C</u> GCC gene transcription product.

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23. (Currently Amended) The method of claim 21 wherein expression of guanylin cyclase C GCC by said tumor cell is determined by polymerase chain reaction wherein mRNA from said tumor cell or cDNA generated therefrom is contacted with primers that selectively amplify guanylin cyclase C GCC gene transcript or cDNA generated therefrom.

24. (Currently Amended) The method of claim 21 wherein expression of guanylin cyclase C GCC by said tumor cell is determined by immunoassay wherein protein from said tumor cell is contacted with antibodies that specifically bind to guanylin cyclase C GCC gene translation product.

25-28 (Cancelled)

- 29. (Currently Amended) A method of diagnosing an individual who has esophageal cancer comprising the steps of examining a sample of esophagus tissue to detect the presence of guanylin cyclase C GCC transcript or translation product wherein the presence of guanylin cyclase C GCC transcript or translation product in an esophageal sample indicates esophageal cancer.
- 30. (Currently Amended) The method of claim 29 comprising the steps of examining said sample of esophageal tissue to determine whether guanylin cyclase C GCC gene transcription product is present in said sample.
- 31. (Currently Amended) The method of claim 30 wherein the presence of guanylin cyclase C GCC gene transcription product is determined by polymerase chain reaction wherein said sample is contacted with primers that selectively amplify guanylin cyclase C GCC gene transcript or cDNA generated therefrom.
- 32. (Currently Amended) The method of claim 29 wherein the presence of <u>guanylin cyclase C</u> GCC gene translation product is determined by immunoassay wherein said sample is contacted with antibodies that specifically bind to <u>guanylin cyclase C</u> GCC gene translation product.

33-38 (Cancelled)

- 39. (New). The method of claim 1 wherein expression of said guanylin cyclase C by said cells is determined by detecting guanylin cyclase C gene translation product in said sample.
- 40. (New). The method of claim 11 wherein the presence of guanylin cyclase C gene translation product in said sample is detected.

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41. (New). A method of diagnosing an individual who has esophageal cancer comprising the steps of:

contacting esophageal tissue of said individual with a conjugated compound that comprises a guanylin cyclase C binding moiety linked to a photoactivate imaging agent,

exposing said esophageal tissue to light to activate any photoactive imaging agent of said conjugated compound bound to said esophageal tissue; and

determining whether any activated photoactive imaging agent of said conjugated compound bound to said esophageal tissue;

wherein the presence of activated photoactive imaging agent of said conjugated compound bound to said-esophageal-tissue is indicative of esophageal-cancer.

42. (New). The method of claim 41 wherein said esophageal tissue is contacted with the conjugated compound by administering said compound to said esophageal tissue by an intraoperative spray.